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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/743,871	12/24/2003	Osamu Sagano	02910.000106	9351
5514 7590 08/28/2007 FITZPATRICK CELLA HARPER & SCINTO 30 ROCKEFELLER PLAZA NEW YORK, NY 10112			EXAMINER DINH, DUC Q	
			ART UNIT 2629	PAPER NUMBER
			MAIL DATE 08/28/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/743,871	Applicant(s) SAGANO ET AL.	
	Examiner DUC Q. DINH	Art Unit 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 June 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 6-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 6-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1 and 6-13 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 1 recites “an effective voltage calculating circuit for finding an effective voltage value on the basis of the image data”. Although, the specification page 30-31 discloses a voltage drop quantity calculating 11 having a current converting part 30 for converting effective voltage data into the device data ...”, there is no support for the recited limitation. Furthermore, there is no support for a compensation value calculating circuit ... with respect to the effective voltage value as claimed.

3. Claim 1 and 6-13 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claim 1 “an effective voltage calculating circuit for finding an effective voltage value on the basis of the image data”, the specification is not enabling as to how one of ordinary skill in the art where to find or how to find an effective voltage value on the basis of the image data” as claimed.

Art Unit: 2629

The examiner examines the application based on best understood of the claimed languages.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1 and 6-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki (U.S Patent No. 5,734,361) in view of Sarrasin et al. (U.S Patent No. 5,555,000), hereinafter Sarrasin.

In reference to claim 1, Suzuki discloses in Fig. 27 an image display apparatus comprising:

image display devices arranged in matrix form, driven via a plurality of row wirings and column wirings, and used for forming an image;

scanning circuit (202) for sequentially selecting and scanning the row wirings (3072:fig. 4);

modulation circuit (209) for outputting a modulated signal to be applied to the column wirings (3073. Fig. 4); and

voltage drop compensation circuit (206, 207, 208 of Fig. 27) for calculating corrected image data for reducing an influence of voltage drops due to at least resistance components of the row wirings, with respect to image data, col.(10, lines 45-51);

wherein the voltage drop compensation circuit includes: an effective voltage calculating circuit (207) for finding an effective voltage value on the basis of image data (col. 23, lines 30-50); and

a compensation value calculating circuit (208) for calculating for reducing an influence of voltage drops due to at least resistance components of the row wiring, with respected to the effective voltage value; and

wherein the modulation circuit output a modulated signal, a voltage amplitude are expend on the basic of the corrected image data.

Accordingly, Suzuki discloses everything except a modulation circuit outputted/applying a modulated signal, a voltage amplitude of which varies in one pulse signal. However, Sassarin discloses a method of an apparatus a modulated signal which the amplitude of it is varies in one pulse signal as shown in Fig. 1.

It would have been obvious for one of ordinary skill in the art at the time of the invention to use the voltage amplitude signal varies in one pulses for the modulated signal as taught by Sarrarin in the device of Suzuki because it would provide a display system that have a combination of the advantages of the consumption of digital circuits and the analog addressing method, while permitting the selection of a large number of grey levels. (col. 3, lines 25-30)

In reference to claim 6, Sassarin discloses in Fig. 1 the modulated signal has a plurality of voltage amplitude values.

In reference to claim 7, Sassarin discloses wherein the modulation circuit increases a time width of a pulse waveform of the modulated signal by one unit time or a voltage amplitude value

Art Unit: 2629

of a portion of the pulse waveform of the modulated signal by one unit voltage (V5-V6 of Fig. 1 of Sassarin), when input data of the modulation circuit is increased by one unit.

In reference to claims 8-10, Suzuki discloses wherein the voltage drop compensation circuit calculates the corrected image data with respect to image data obtained by multiplying the image data by a gain of greater than 0 but not greater than 1, so that the corrected image is contained in an input range of the modulation circuit. (see Fig. 8-10 and 28)

In reference to claims 13, Suzuki discloses wherein the modulation circuit outputs the modulated signal on the basis of limited range-corrected image data obtained by multiplying the corrected image data by a gain of greater than 0 but not greater than 1, so that the limited range-corrected image data is contained in an input range of the modulation circuit. (see Fig. 8-10 and 28)

Response to Arguments

6. Applicant's arguments with respect to claims 1 and 6-13 have been considered but are moot in view of the new ground(s) of rejection.

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

Art Unit: 2629

however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DUC Q. DINH whose telephone number is (571) 272-7686. The examiner can normally be reached on Mon-Fri from 8:00.AM-4:00.PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe can be reached on (571) 272-7691. The fax phone number for the organization where this application or proceeding is assigned is **571-273-8300**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DUC Q DINH
Examiner
Art Unit 2629

